USB-C KIT FOR

NINTENDO WII U PRO CONTROLLER
PLAYSTATION 3 DUALSHOCK CONTROLLER

PRODUCT

HTTPS://SHOP.GILTESA.COM/PRODUCT/NINTENDO-WII-U-PRO-CONTROLLER-USB-C-KIT

PLEASE READ THROUGH THESE INSTRUCTIONS ENTIRELY BEFORE ATTEMPTING TO INSTALL.

WARNING: IF YOU ARE NOT COMFORTABLE WITH SOLDERING, OR PERFORMING ANY STEP IN THIS GUIDE, DO NOT PERFORM THE INSTALL YOURSELF. FIND SOMEONE WHO IS COMFORTABLE TO DO IT FOR YOU.

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DESCRIPTION

The **Nintendo Wii U Pro Controller: USB-C** is a board that allows you to replace the original charging connector with a modern and standard **USB-C** port.

If your original connector is too old or damaged and you need a new one, or **if you would like to charge your Wii U Pro Controller with a standard USB-C charger**, like the charger for your **Nintendo Switch**, phone, or laptop, you can do so with this board.

This board is compatible with the following model:

- Nintendo Wii U Pro Controller (WUP-005)
- PlayStation 3 DualShock Controller NEW

FEATURES

- Charging your Wii U Pro Controller with:
  - USB power banks
  - USB-A chargers
  - USB-C chargers
  - USB-C PD chargers (normal speed, not fast)
  - USB-A to USB-C cables
  - USB-C to USB-C cables
- USB data support, like the original MiniUSB connector. (1)

INCLUDED

- 1 flexible board.

RECOMMENDED / REQUIRED [NOT INCLUDED]

- Tri-wing and Phillips screwdrivers.
- Tin soldering iron.
- Tin.
- Flux.
- Desoldering pump.
- Desoldering mesh.
- Isopropyl alcohol.

NOTES

(1) The connector supports data connection; however, the Wii U Pro Controller does not use it at all. It cannot function as a wired gamepad, neither before nor after the modification. Perhaps Nintendo wired the connector for potential firmware updates.

The data connection can be used with the PlayStation 3 DualShock controller. The console and the computer detect the controller when it is connected.

BOARD DETAILS

This small flexible board has a total of 4 pads.

The pads, from left to right, correspond to:

1. VCC — The +5V pad.
2. D- — Negative pad of the data connection.
3. D+ — Positive pad of the data connection.
4. GND — The ground pad.

TEST THE BOARD!

Before starting the installation, you should test the board. If it doesn't work contact me for a replacement *(all boards are fully tested, but they may damage during the shipping, we try to package them as better as possible),* **if it works, go ahead with the installation**.

Connect the power from your USB charger to the USB-C connector on the board. Then, with a multimeter in voltage measurement mode, **check for a 5V reading. If that's the case, continue with the installation.**

Unfortunately, it is not possible to test the data connection.

INSTALLATION STEPS FOR NINTENDO WII U PRO CONTROLLER

Please, carefully read the following steps for a successful installation.

PRE INSTALLATION STEPS

Before the installation, your Wii U Pro Controller may need some extra steps to have it ready for the kit.

1. CHECK THAT YOUR CONTROLLER IS CURRENTLY CHARGING.

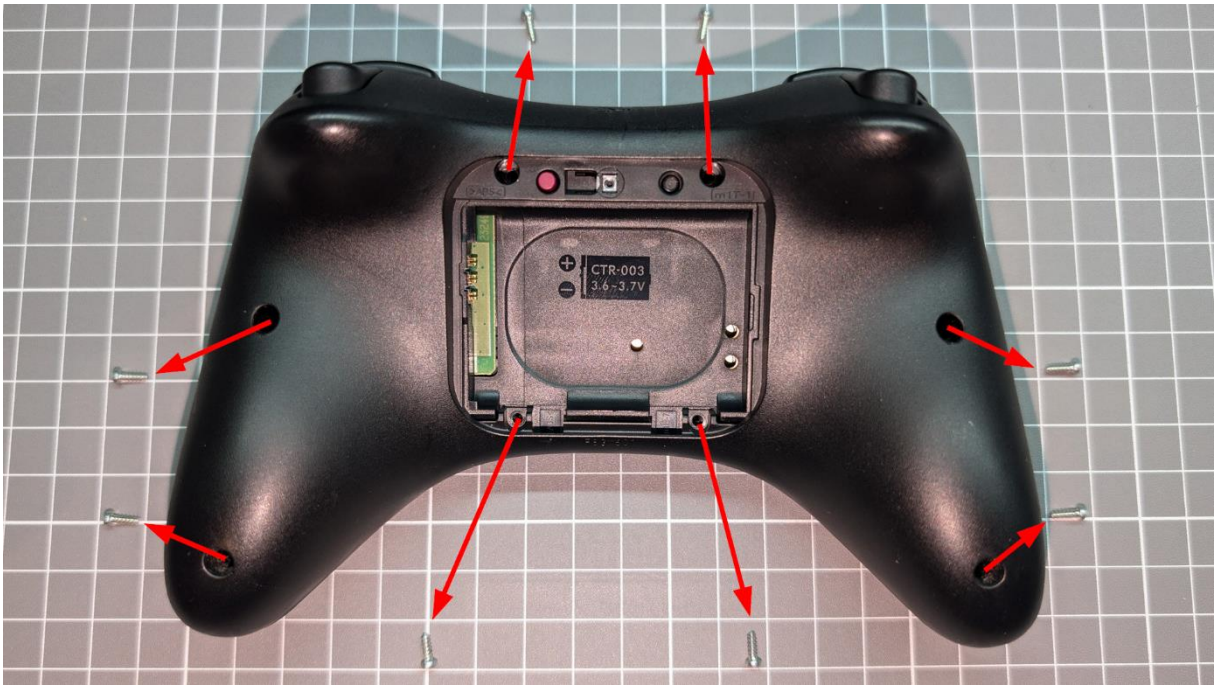
To avoid any surprises, first check that your controller works and charges the battery correctly using a MiniUSB cable.

If you are replacing the connector because it is broken, you won't be able to perform this test. Proceed with the installation.

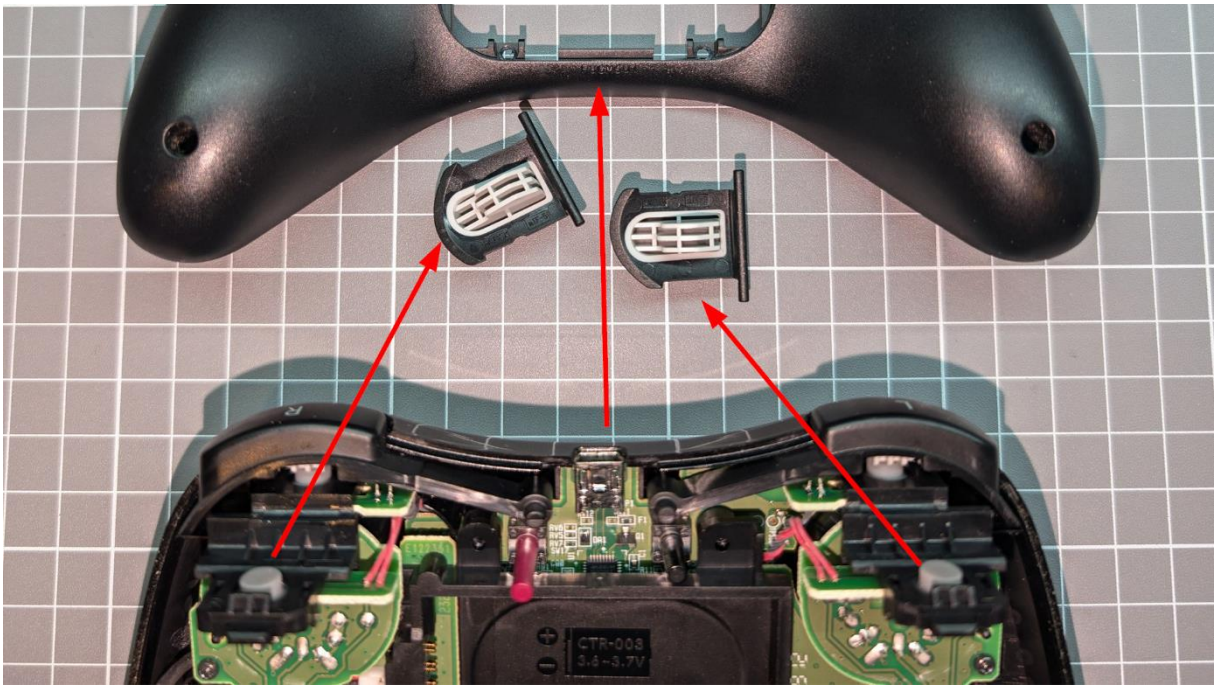
2. DISASSEMBLY THE GAMEPAD

Remove the screw from the battery cover and the battery.

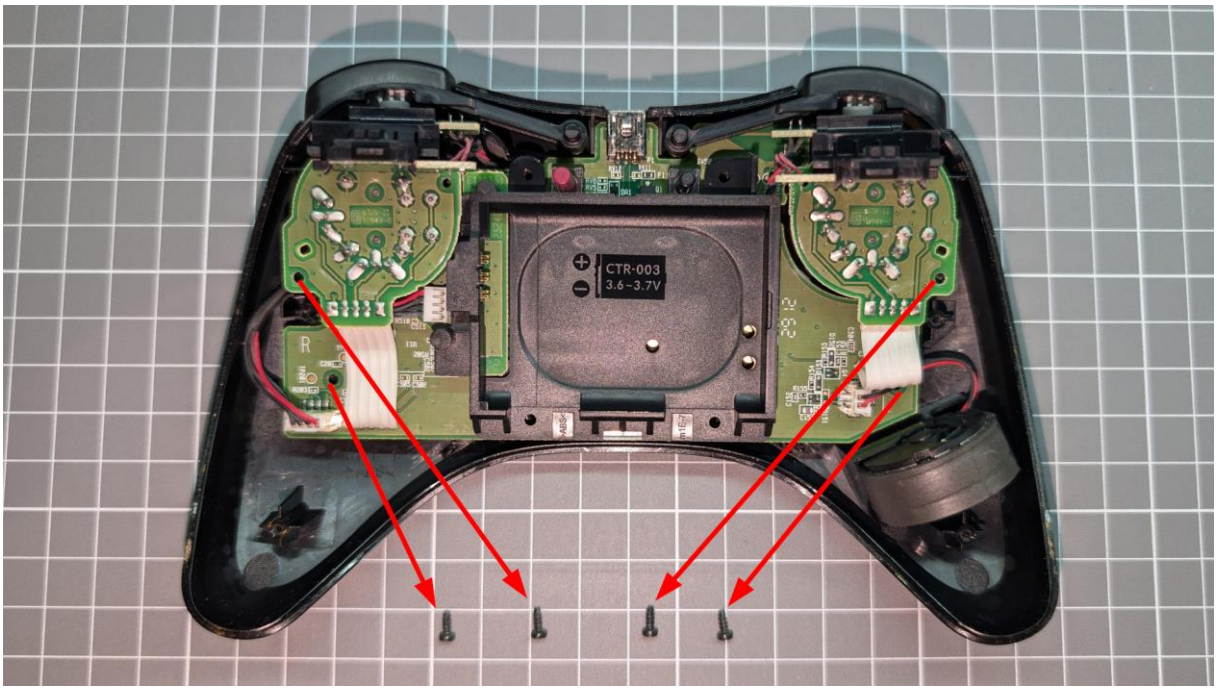
Remove the 8 screws holding the back casing.



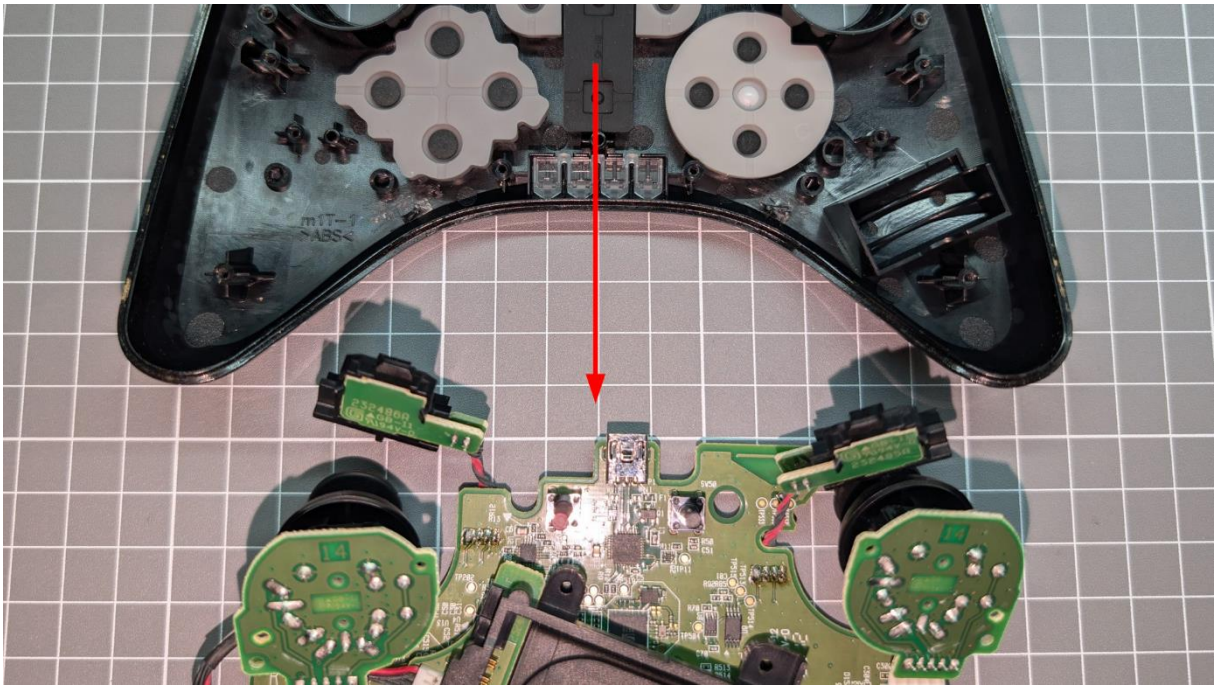
Remove the rear plastic casing as well as the triggers.



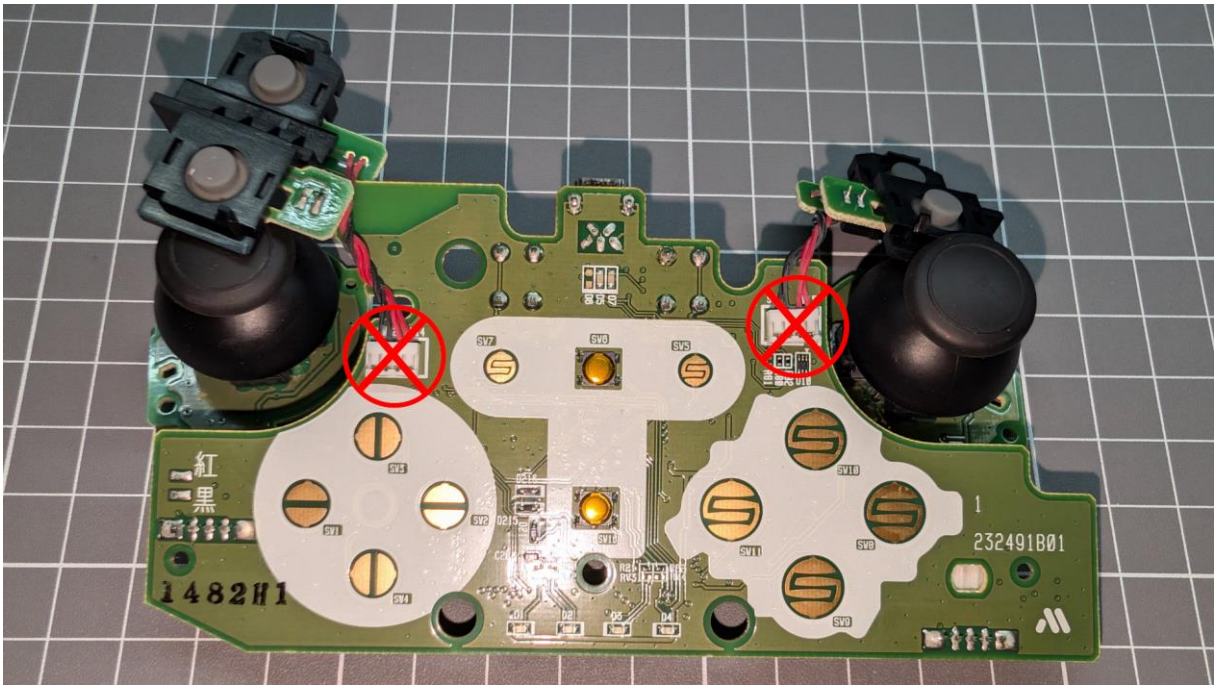
Remove the last 4 screws securing the mainboard to the front casing.



Now, remove the circuit board from the casing, and also disconnect the vibration motor and the battery compartment.

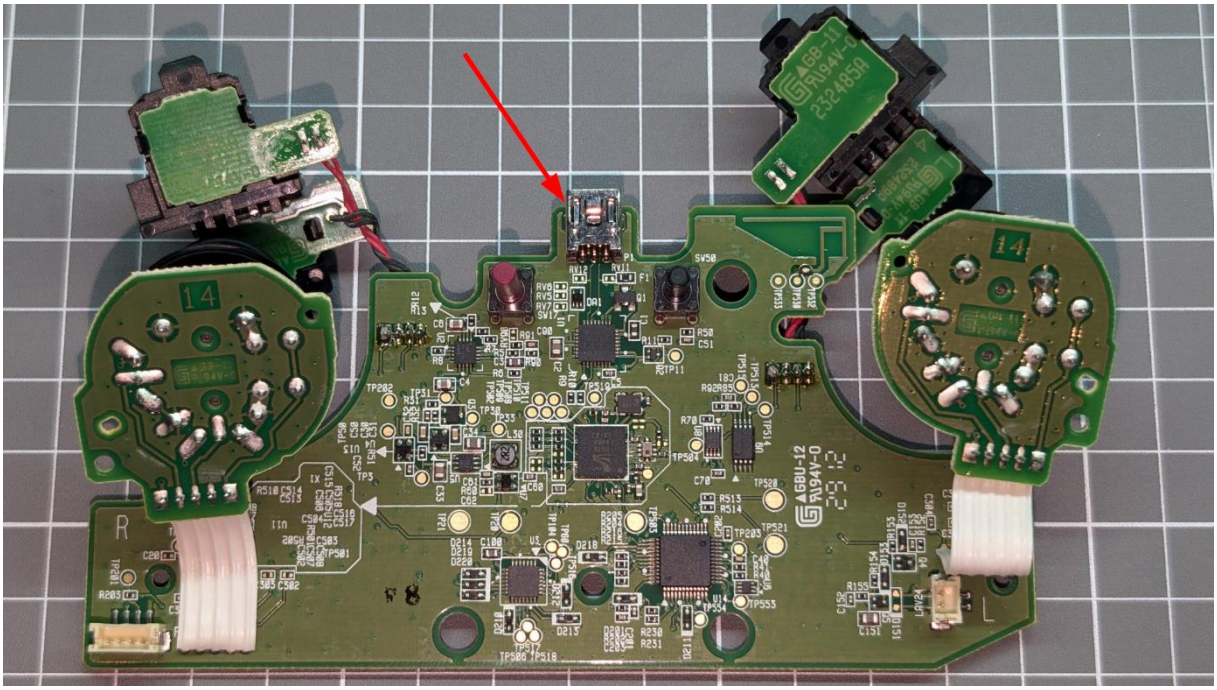


Do not attempt to disconnect these two cables, they are not connectors!

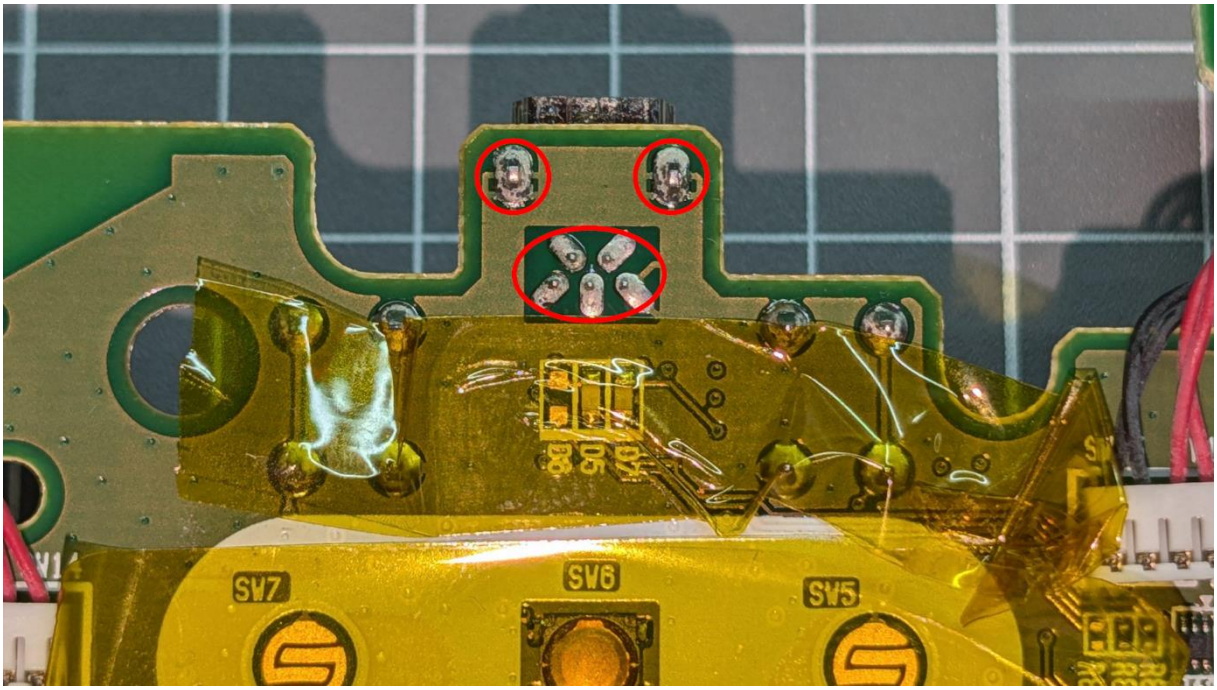


3. REMOVE UNNECESSARY PARTS

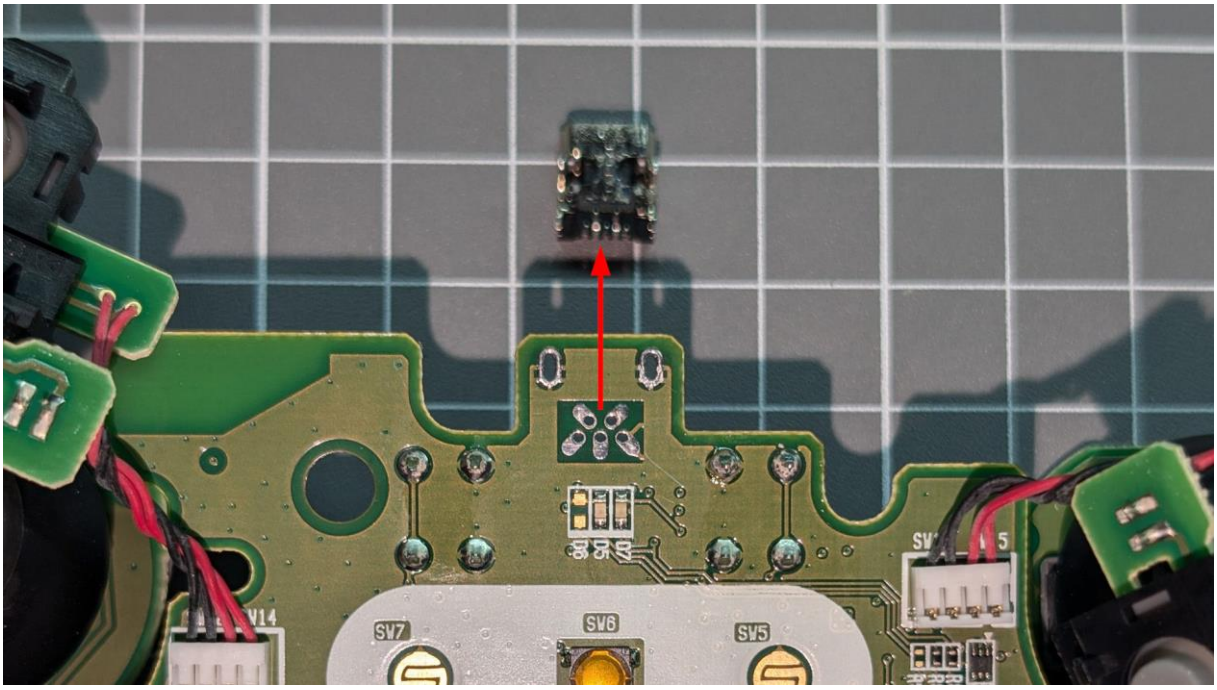
It is only necessary to remove the original power connector from the mainboard.



You can remove it using a hot air rework station (don't forget to protect nearby areas, especially the plastic parts, with Kapton tape), or you can use a soldering iron and a desoldering pump.



Once removed, make sure there are no solder residues in any of the holes. Clean the board with isopropyl alcohol.



INSTALLATION STEPS

It's time to install the USB-C board.

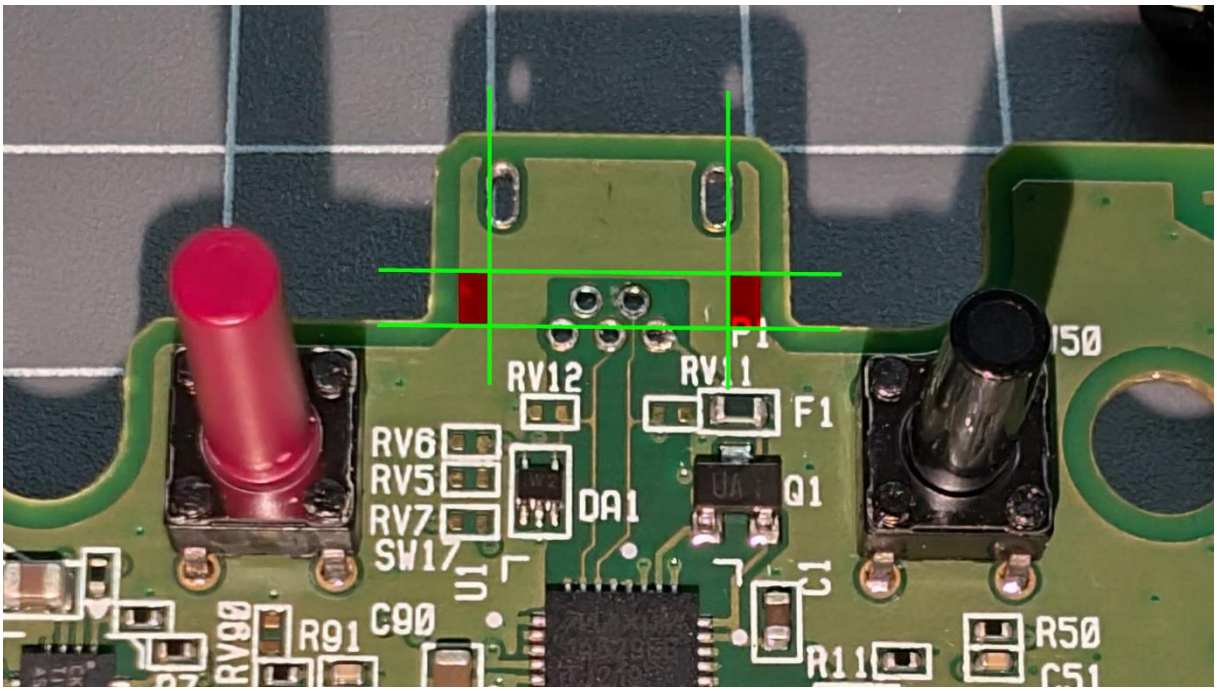
1. PREPARE THE PADS FOR THE NEW CONNECTOR

Unfortunately, there is no USB-C connector with its pins in the same position as the original holes. This means we have to prepare/fabricate some pads to solder the connector.

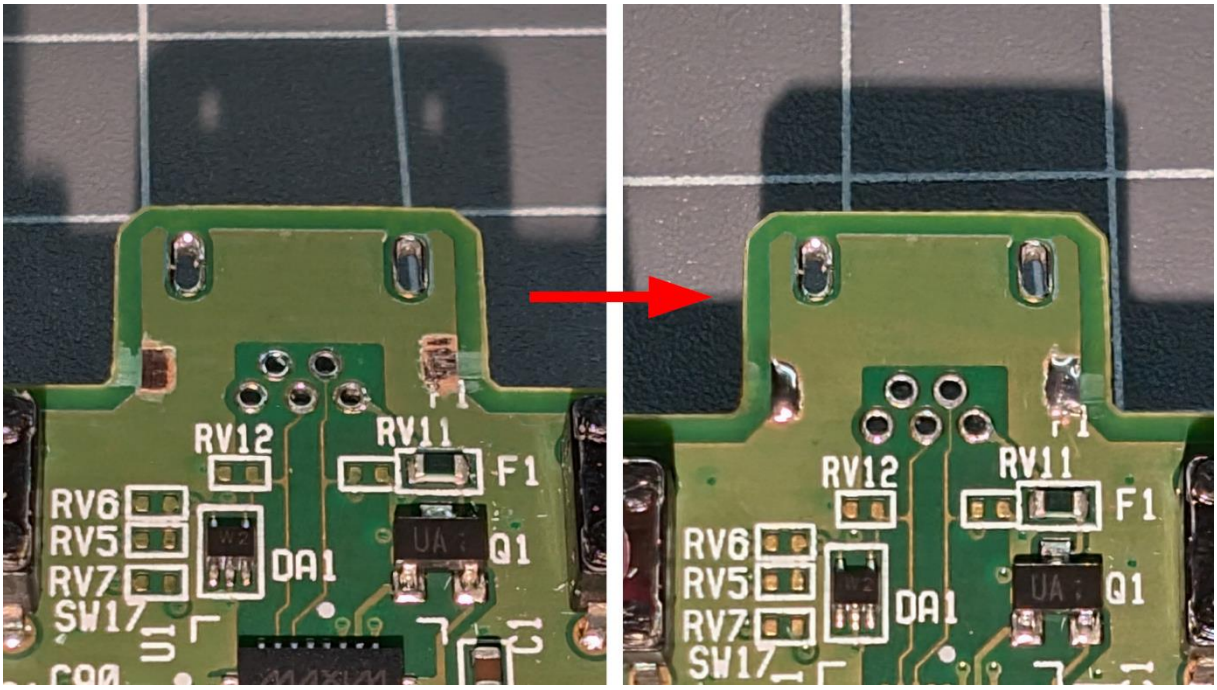
To do this, it is necessary to use the ground plane (GND) of the mainboard to firmly solder the connector. The ground plane is covered by the green soldermask. You need to use a cutter to scrape the surface and remove the paint that hides the copper.

Once the copper is exposed, it will be possible to solder the connector in place.

With this image, the area where the green soldermask needs to be removed is marked in red color.

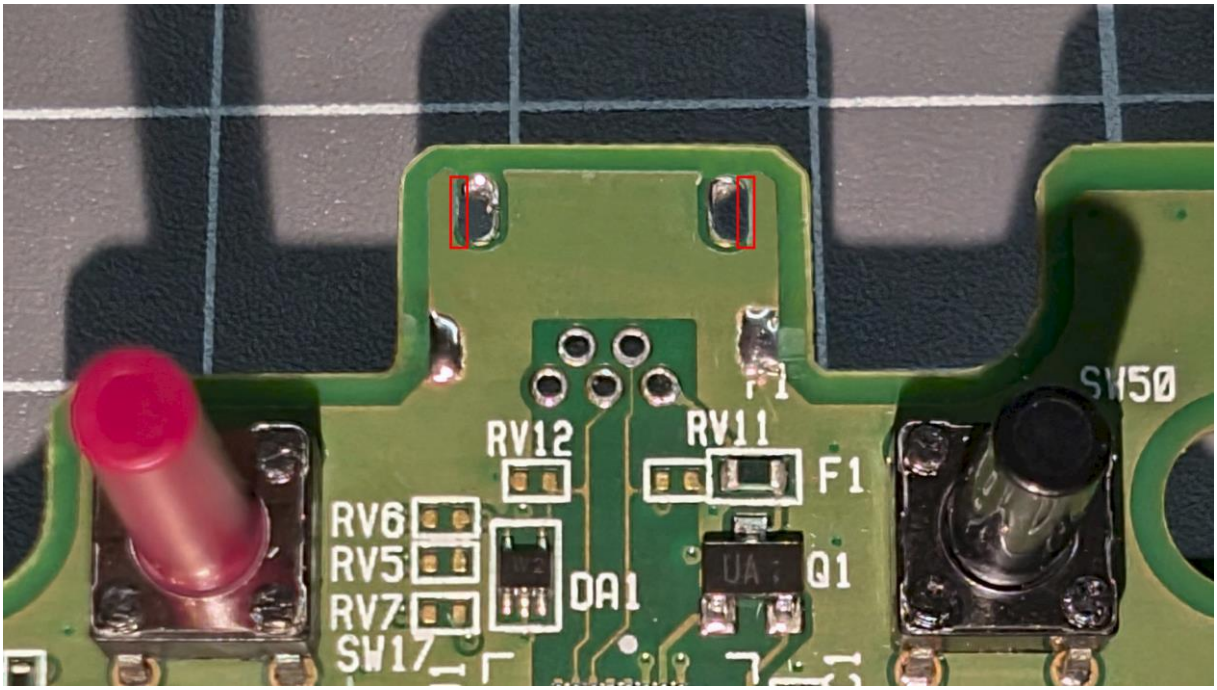


Once the copper is exposed, use solder and the soldering iron to cover it with solder. Don’t use too much solder; just cover the area.

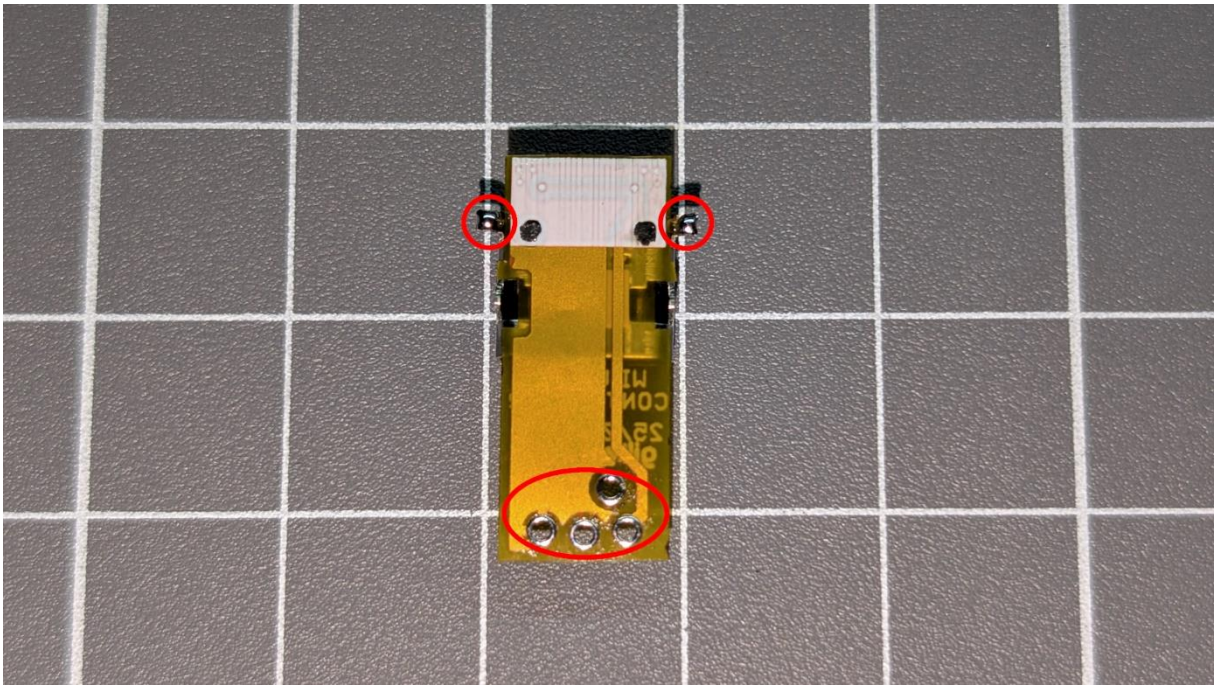


The two upper legs of the USB-C connector also don't align with the holes from the original connector. This can be fixed more easily than the previous step by simply making the hole larger.

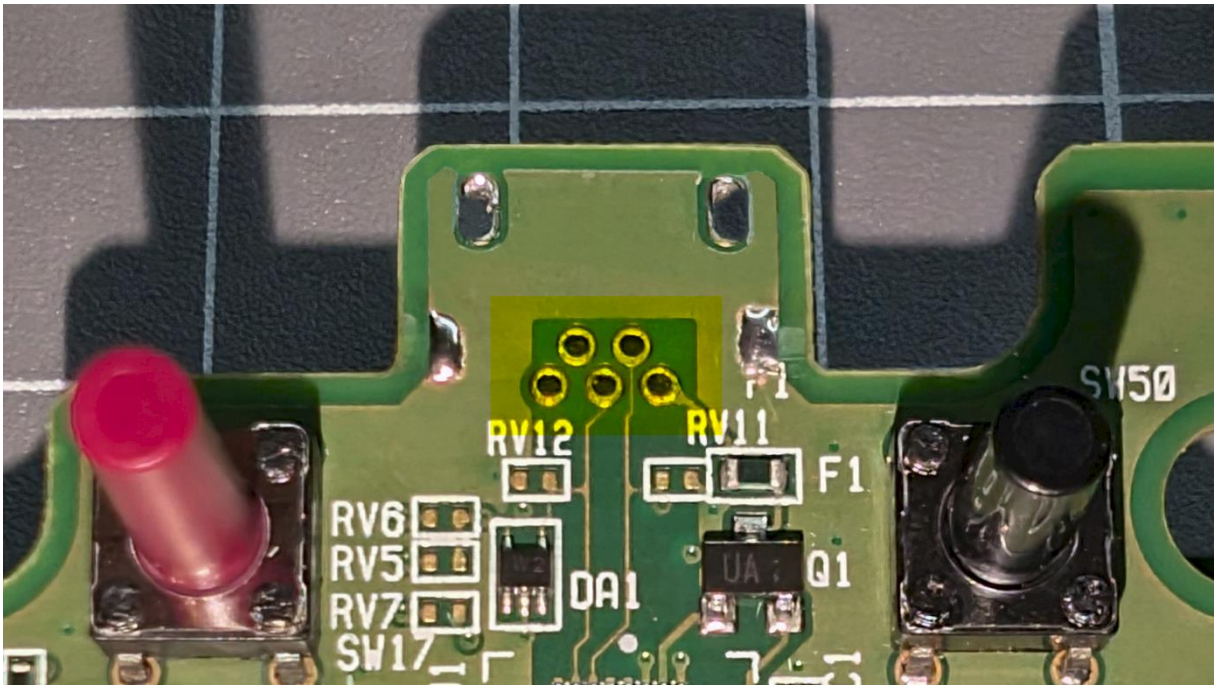
Use a cutter to widen the hole outward. Enlarge it little by little and keep testing until the new USB-C fits properly.



Once the controller's mainboard has been adjusted, all that's left is to pre-solder the pads and the two horizontal legs of the USB-C connector.



Finally, don't forget to place a bit of kapton tape to cover the pads on the mainboard's upper side.



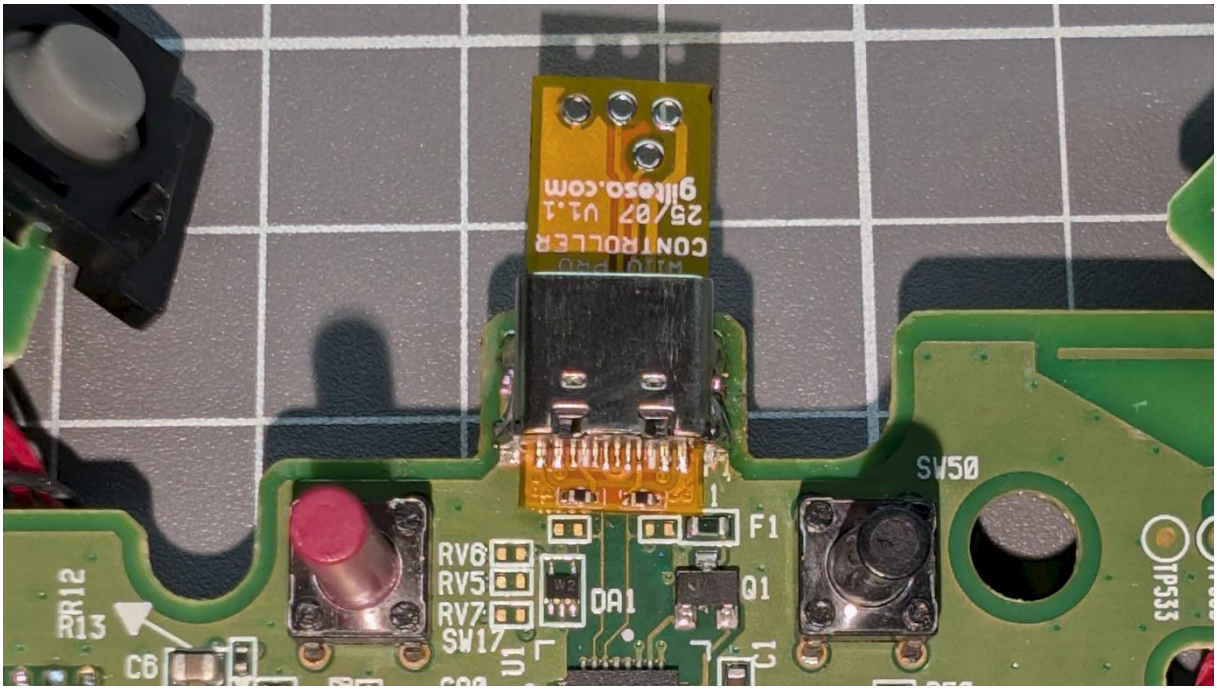
2. BOARD ASSEMBLY

NOTE: If you have flux, apply a small amount to each pad.

Place the new connector on the mainboard and align it perfectly. You will see that the four legs of the USB-C shield are flush with the mainboard.

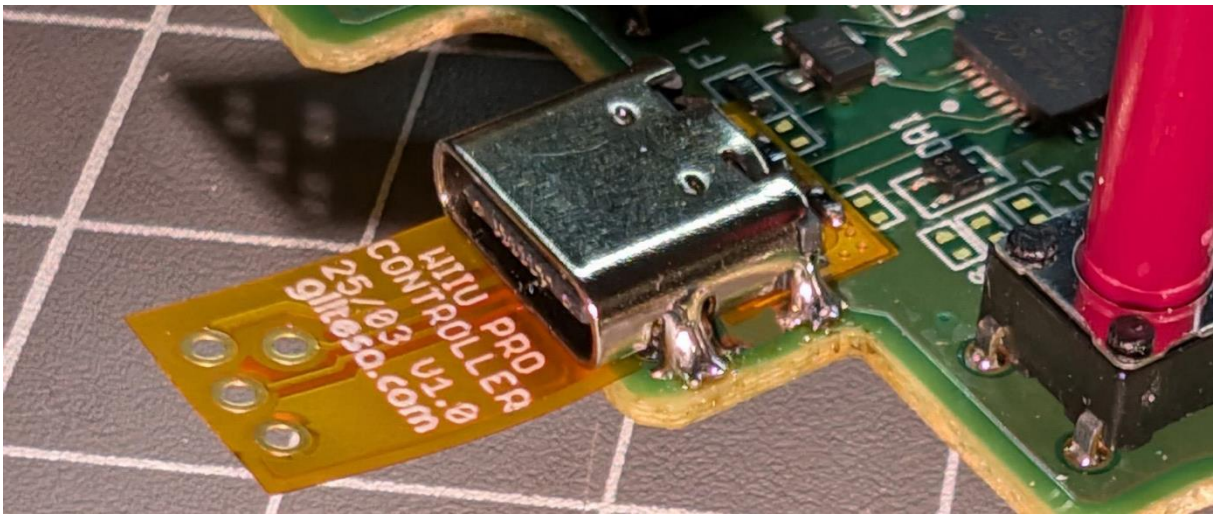
Additionally, the flex circuit should touch the F1 fuse.

By positioning it this way, it will be centered both horizontally and vertically.

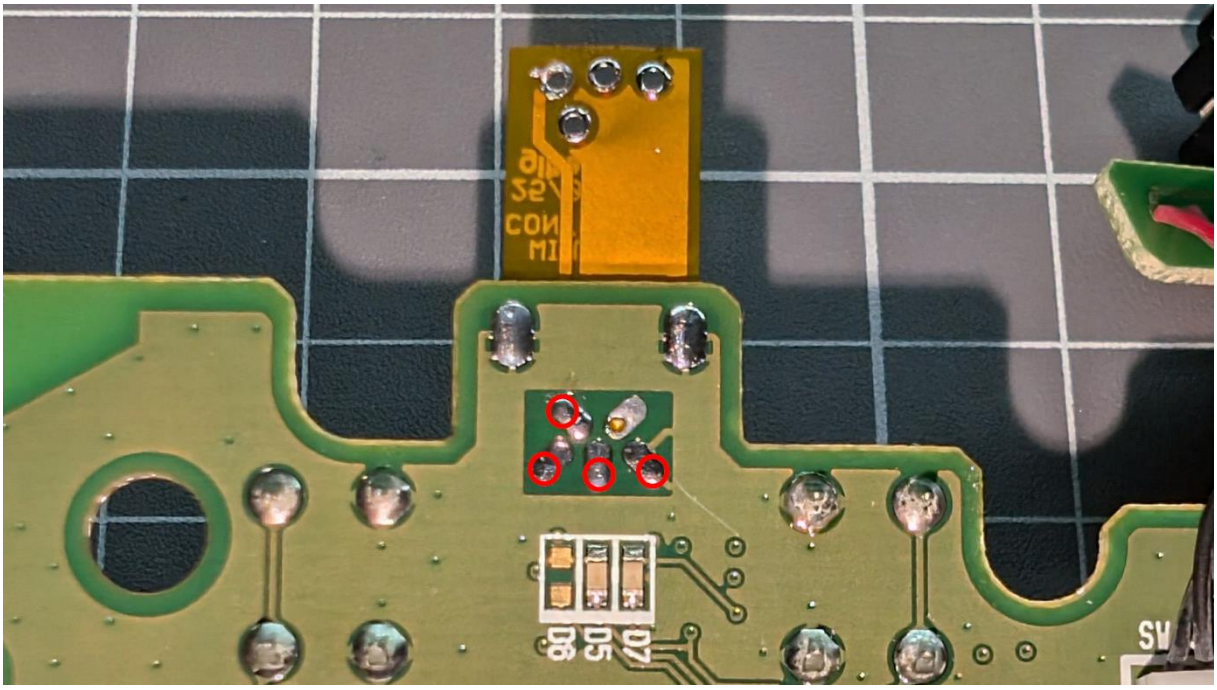


Now, solder one of the leg. Check that the connector is still properly centered. Also, ensure that it is completely flat and parallel to the mainboard.

Proceed to solder the other three legs. Make sure all of them are well soldered, as this will secure the connector firmly to the mainboard.



Tin the 4 pads of the mainboard lightly (the unmarked pad is not used, so it is not necessary to tin it).



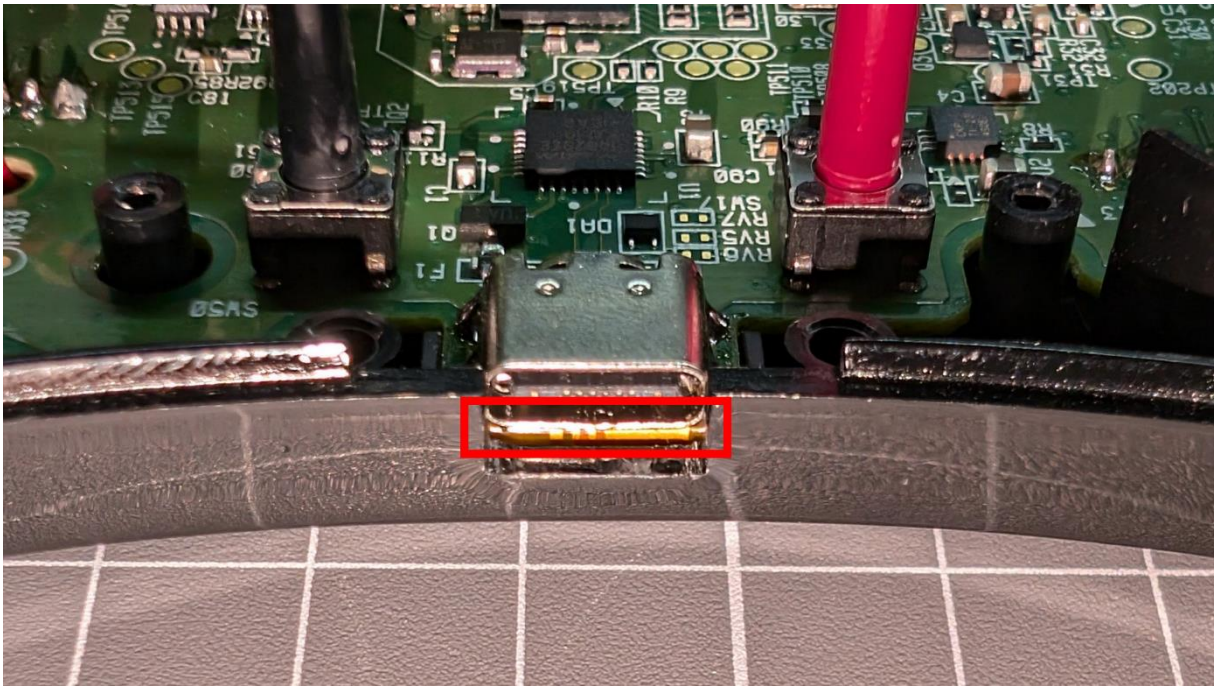
Fold the flex circuit over the mainboard and position it over the previously tinned pads.

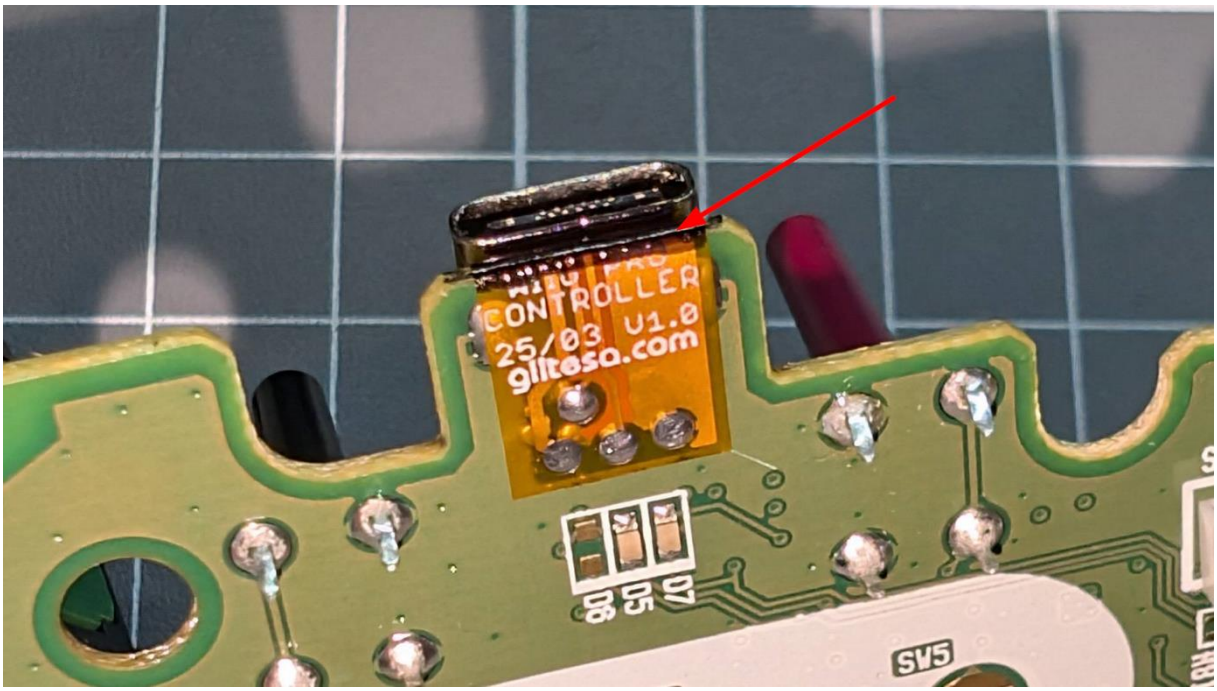
Use pliers to apply pressure on the flex circuit and ensure it is completely flat on the mainboard. Then, apply heat with the soldering iron pad by pad to complete the installation of the USB-C connector.

Clean the board with isopropyl alcohol.

If you wish, you can now connect the battery compartment, the battery, and a USB-C cable to check that the battery is charging normally.

Optionally, you can paint the outer part of the flex circuit with a black permanent marker, so it won't appear yellow once the controller is assembled.

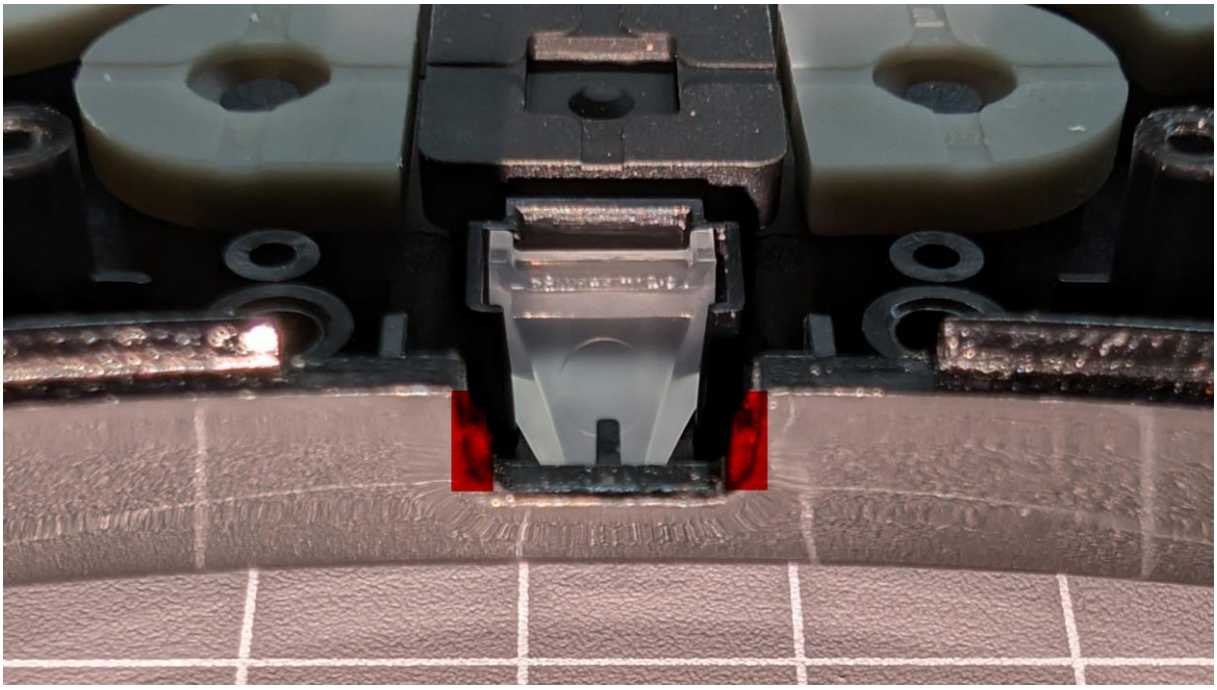




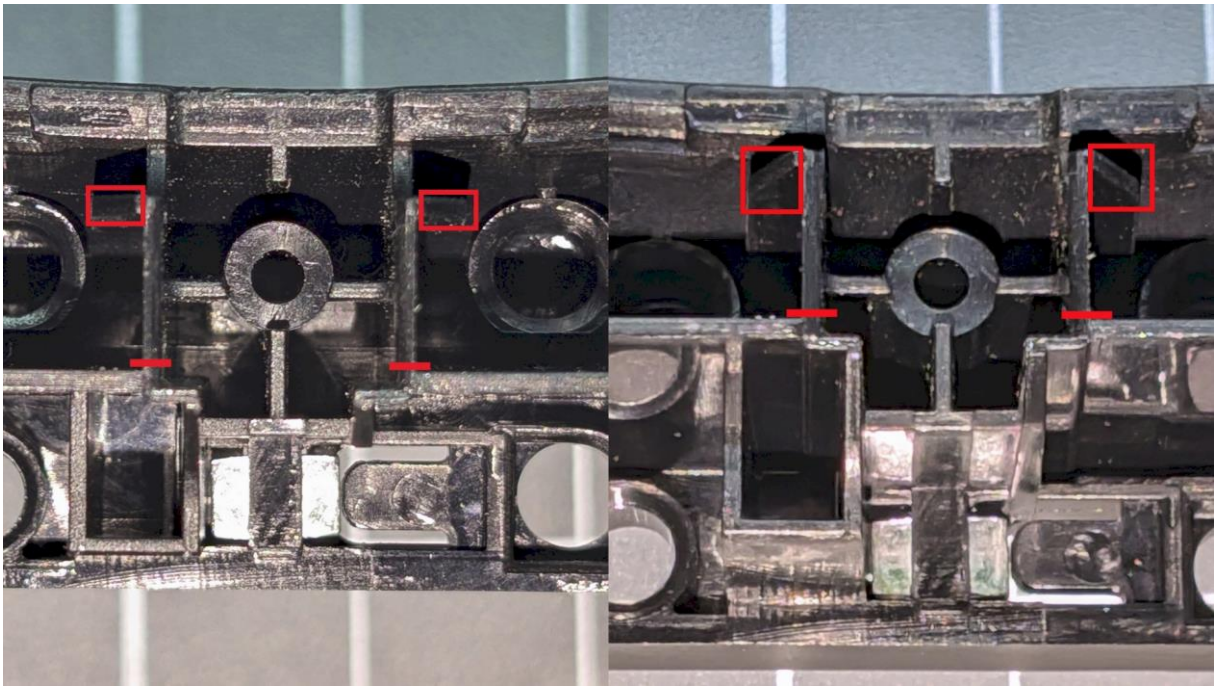
3. CUTTING THE PLASTIC SHELL

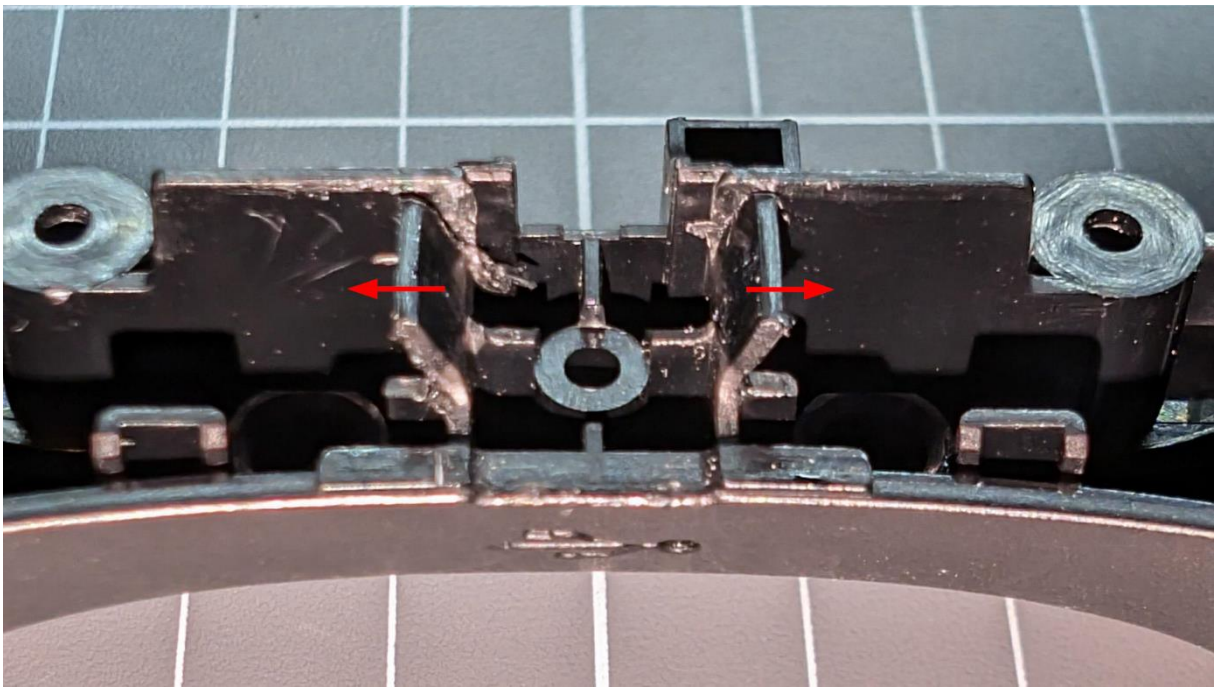
The original MiniUSB connector is smaller than the new USB-C connector. It will be necessary to trim both parts of the casing very slightly in order to connect the USB-C cable and also to close and assemble both pieces of the casing.

First, enlarge the hole laterally in the front casing. It’s not necessary to enlarge it much, just enough to be able to connect the male connector (the one from the charging cable).



In the case of the rear casing, you can remove the entire plastic piece, but it is not really necessary. By making two cuts at the bottom and cutting two tabs at the top, you can bend the rest of the plastic and create space for the new USB-C connector.





4. DONE!

The installation is complete. Follow the steps in reverse to close your Pro Controller and enjoy it powered by USB-C!

INSTALLATION STEPS FOR PLAYSTATION 3 DUALSHOCK CONTROLLER

The installation is very similar for this controller. Below are the most important steps for a successful installation.

If you need even more detailed disassembly steps, check the fantastic iFixit guide:

PS3 Wireless Controller Teardown

PRE INSTALLATION STEPS

Before the installation, your PlayStation 3 DualShock Controller may need some extra steps to have it ready for the kit.

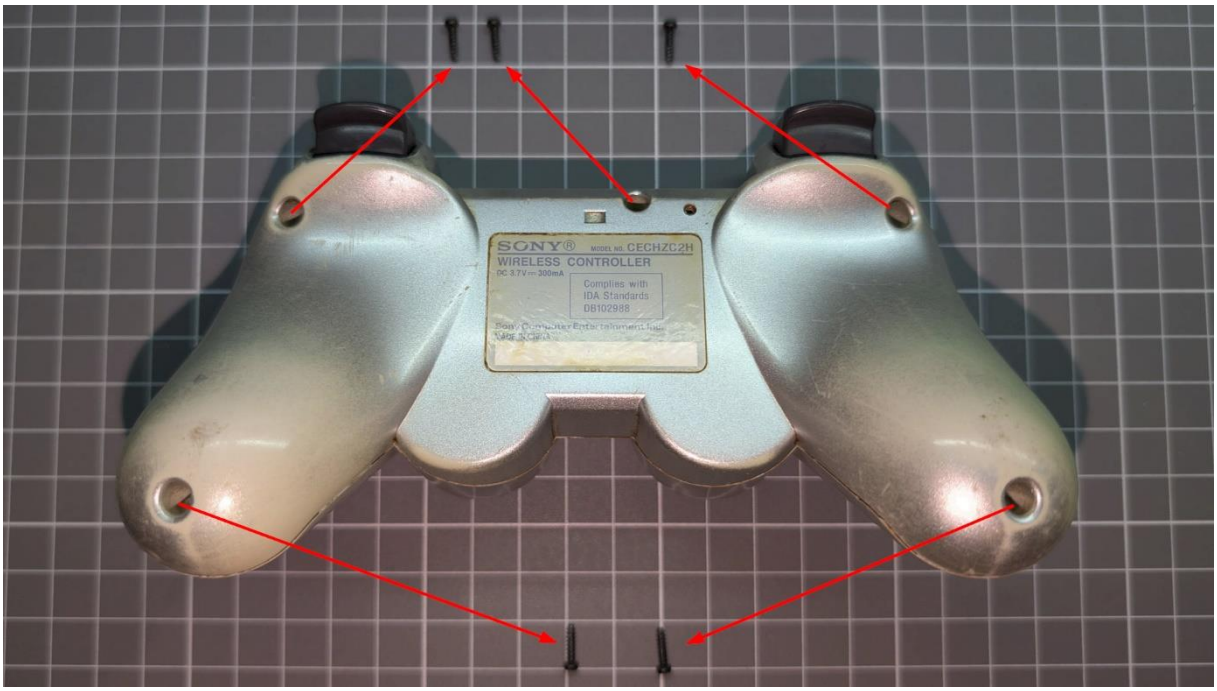
1. CHECK THAT YOUR CONTROLLER IS CURRENTLY.

To avoid any surprises, first check that your controller works and charges the battery correctly using a MiniUSB cable. **Remember that the PS3 controller only starts charging when it is connected to the PS3 or to a PC if you have installed the driver software.**

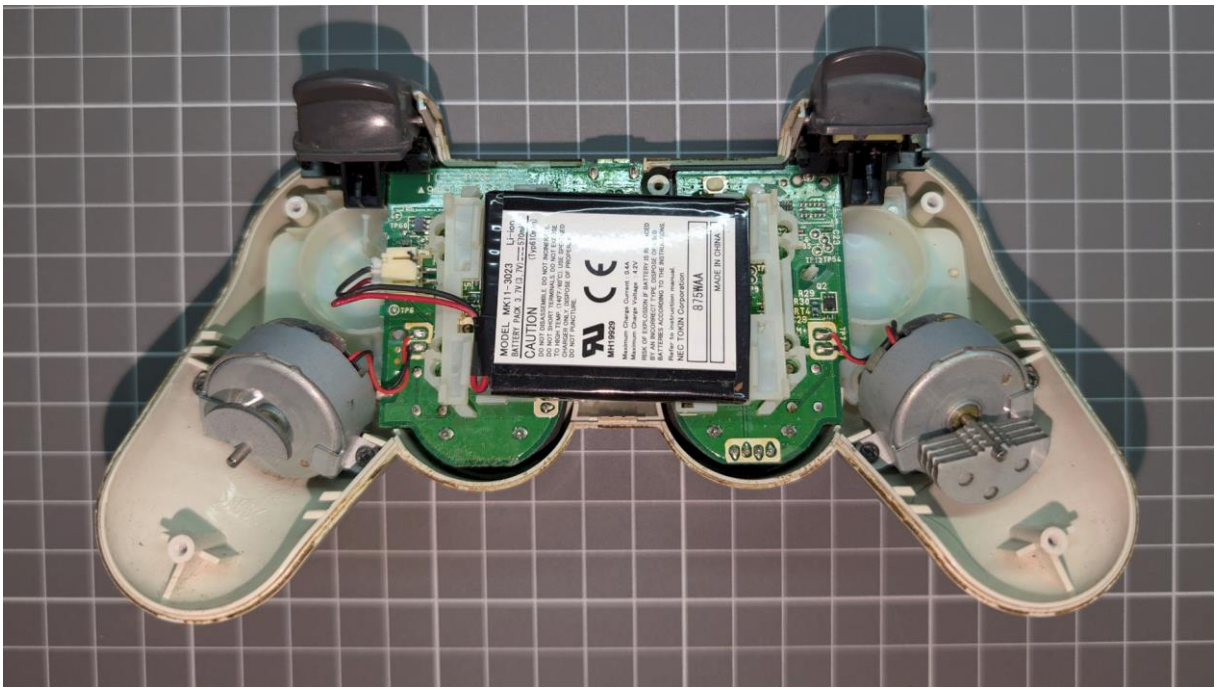
If you are replacing the connector because it is broken, you won't be able to perform this test. Proceed with the installation.

2. DISASSEMBLY THE GAMEPAD

Remove the 5 screws holding the back casing.

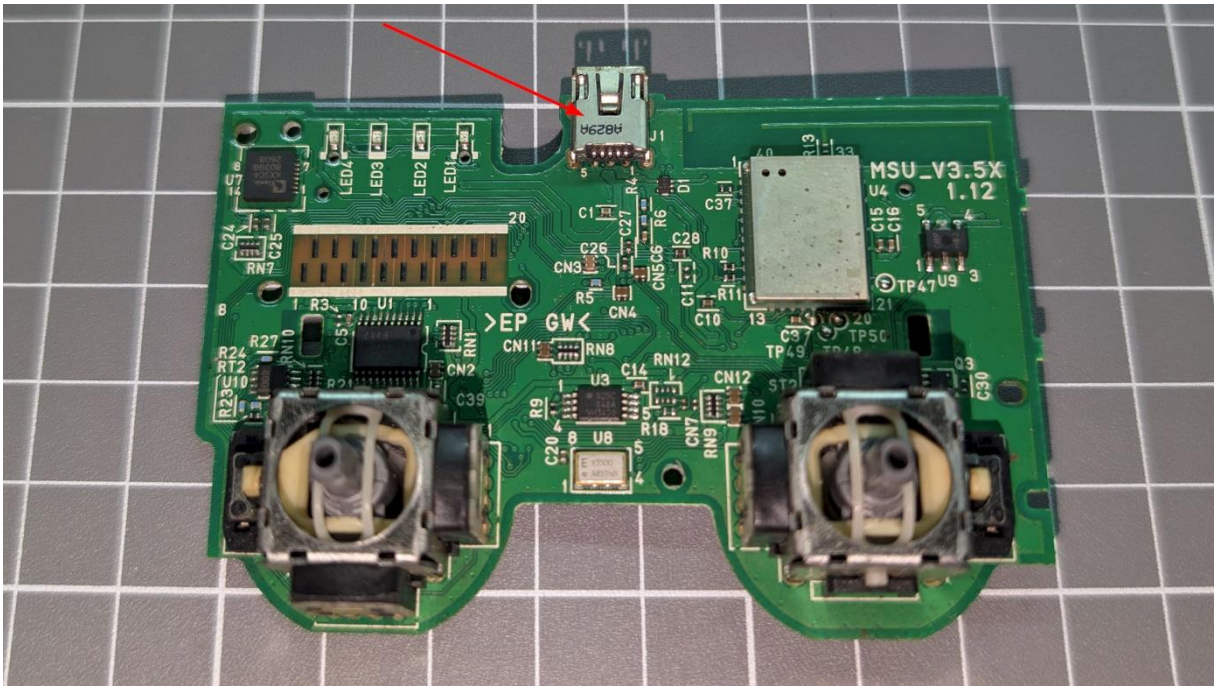


Remove the back shell, the battery, and the battery holder plastic parts. You will also need to desolder the motor wires to be able to remove the board.

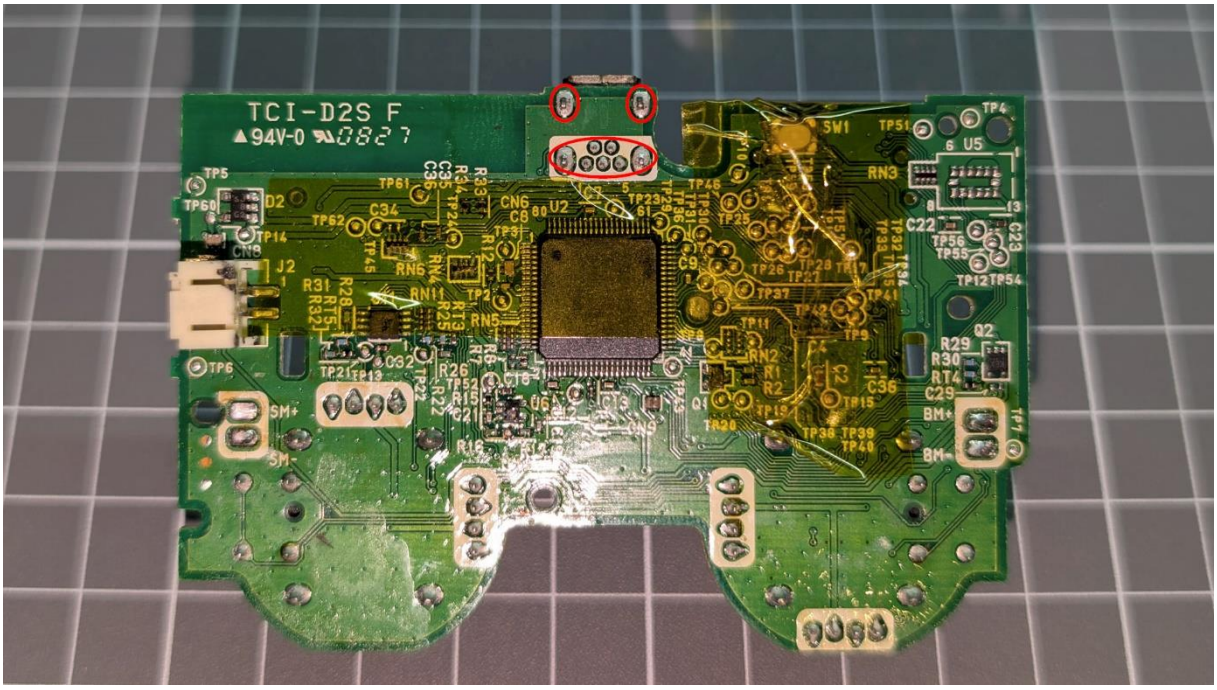


3. REMOVE UNNECESSARY PARTS

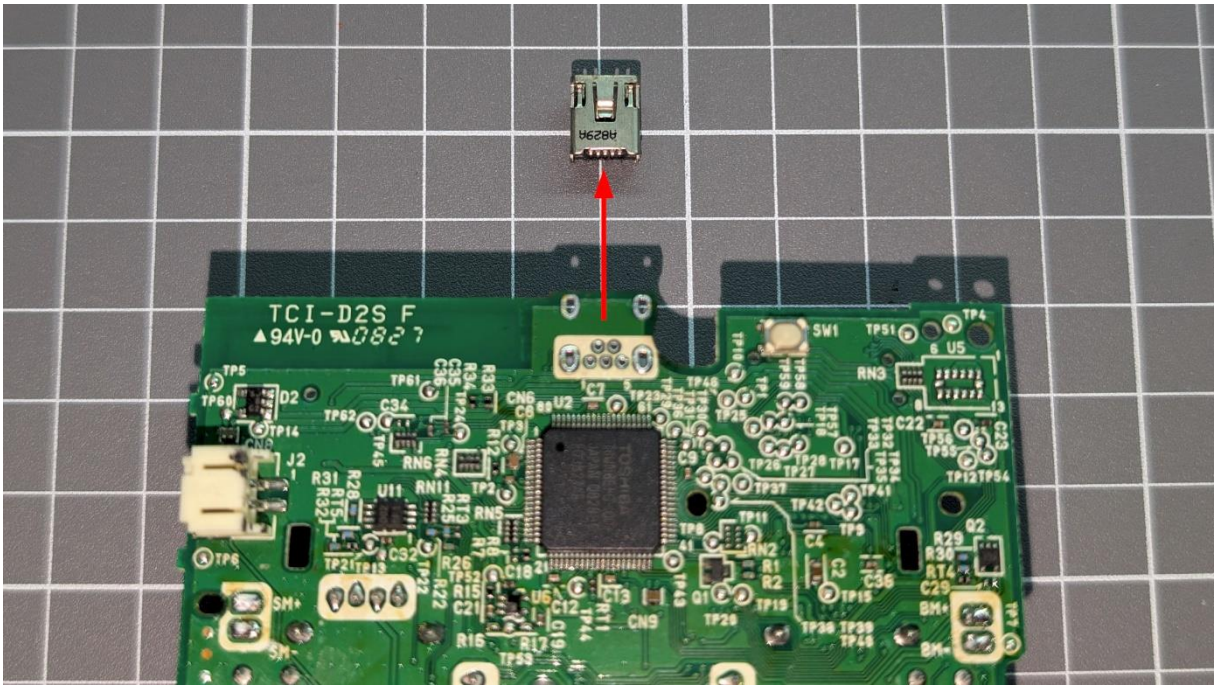
It is only necessary to remove the original power connector from the mainboard.



You can remove it using a hot air rework station (don't forget to protect nearby areas, especially the plastic parts, with kapton tape), or you can use a soldering iron and a desoldering pump.



Once removed, make sure there are no solder residues in any of the holes. Clean the board with isopropyl alcohol.



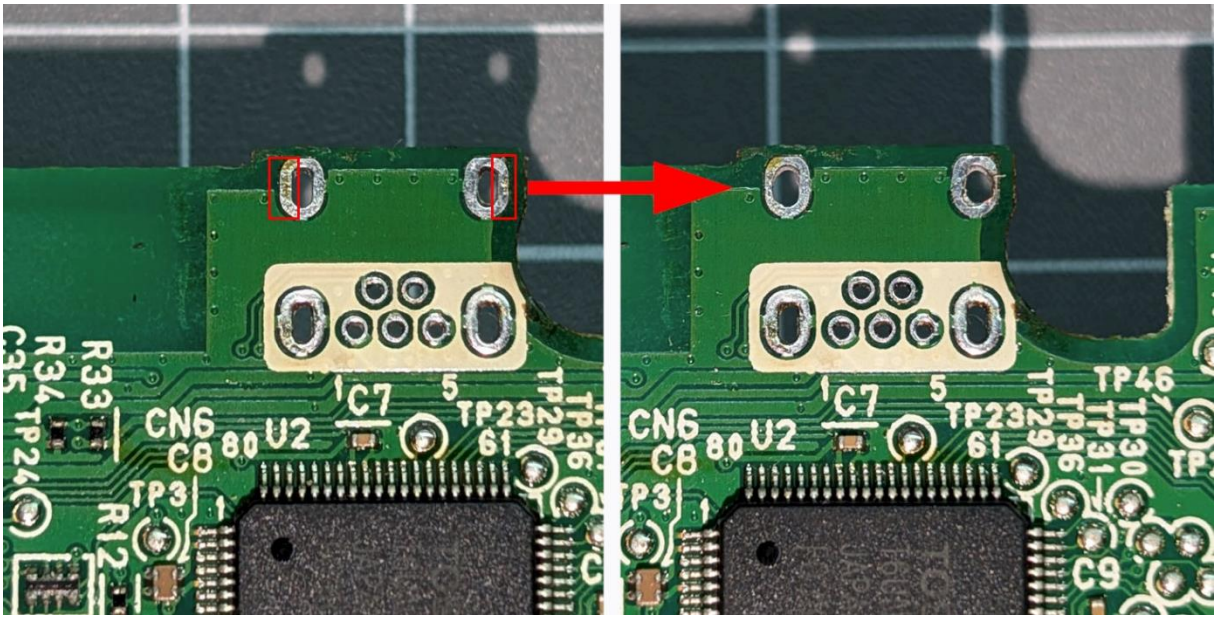
INSTALLATION STEPS

It's time to install the USB-C board.

1. PREPARE THE PADS FOR THE NEW CONNECTOR

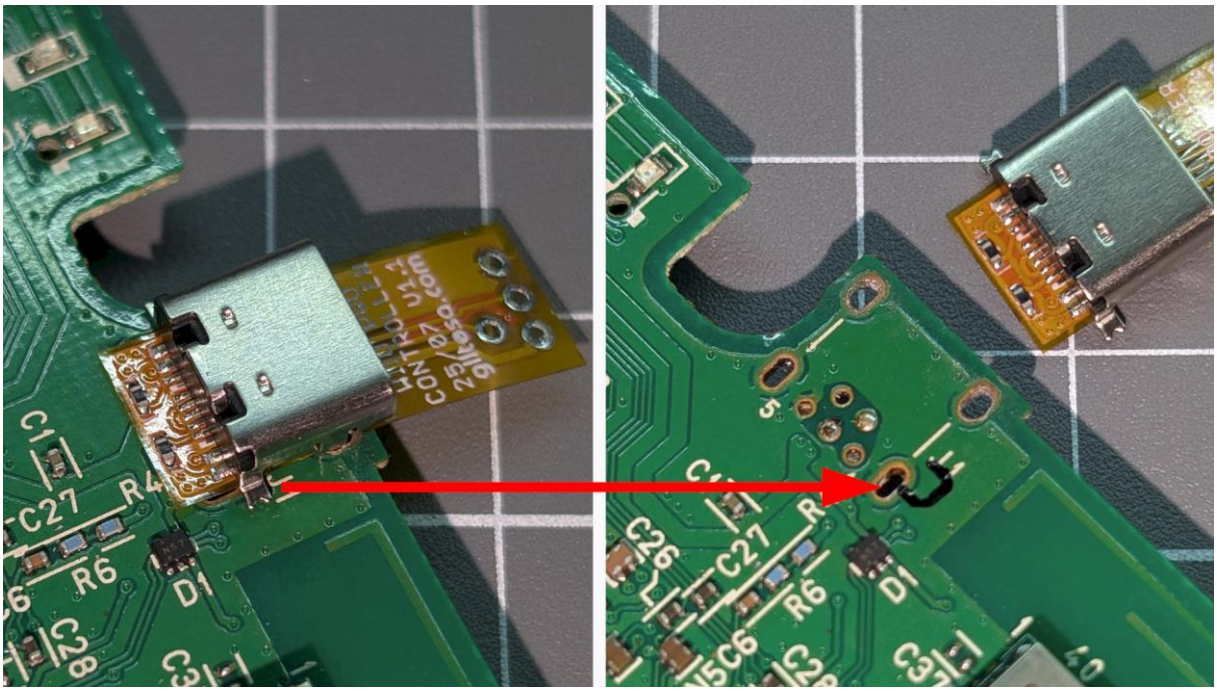
Unfortunately, there is no USB-C connector with its pins in the same position as the original holes. This means that the circuit must be adapted in order to solder the connector.

To do this, **the two upper holes must first be enlarged. They need to be made wider toward the outside**. After that, the USB-C pins will be able to fit into the holes. Both holes should be enlarged little by little, testing the connector fit each time until it is in the correct position.

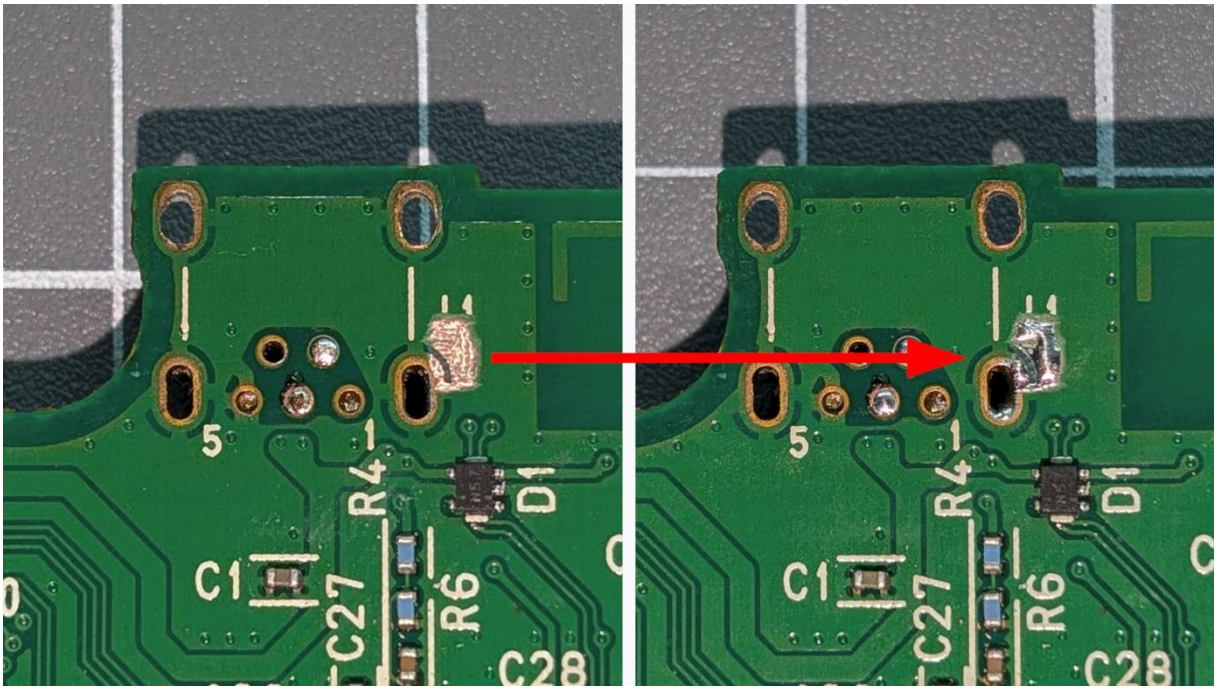


Once both holes have been enlarged, the USB-C connector can be placed in position. However, it will be seen that the connector has two additional pins that are now left exposed. Optionally, the pin on the right side can be soldered, but it is necessary to adapt the circuit again.

Mark the location of the USB-C pin with a permanent marker. The green solder mask must be removed with a cutter by scraping the surface.

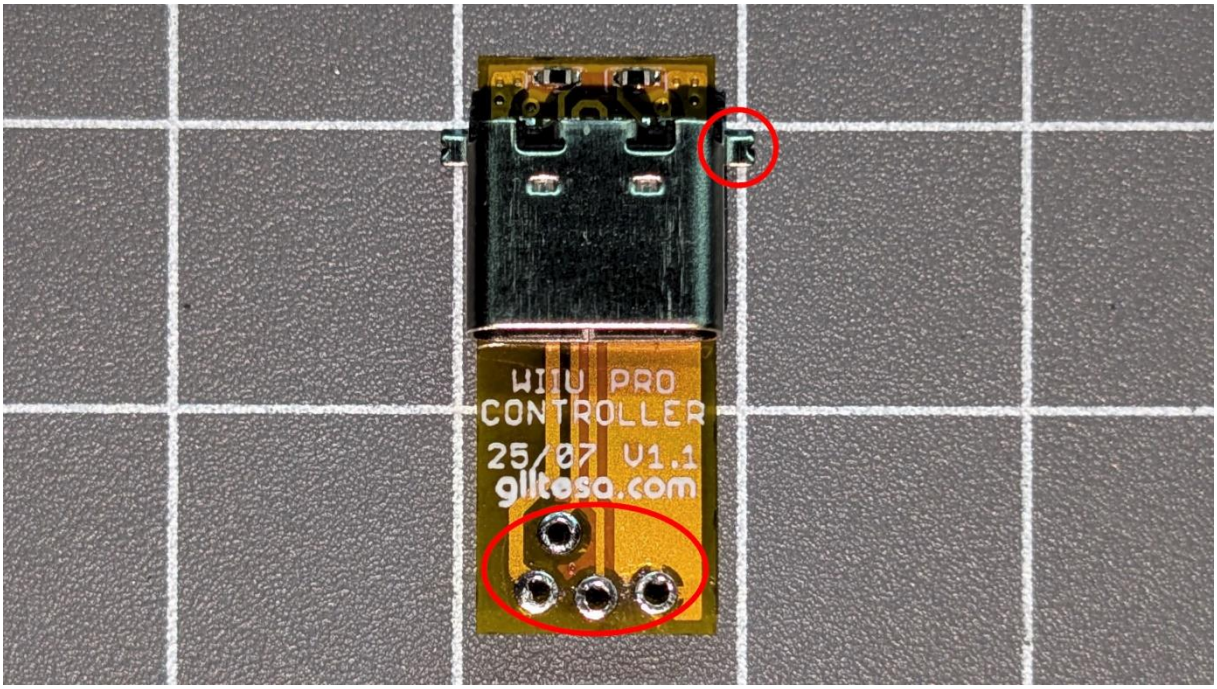


Then pre-tin the new pad.

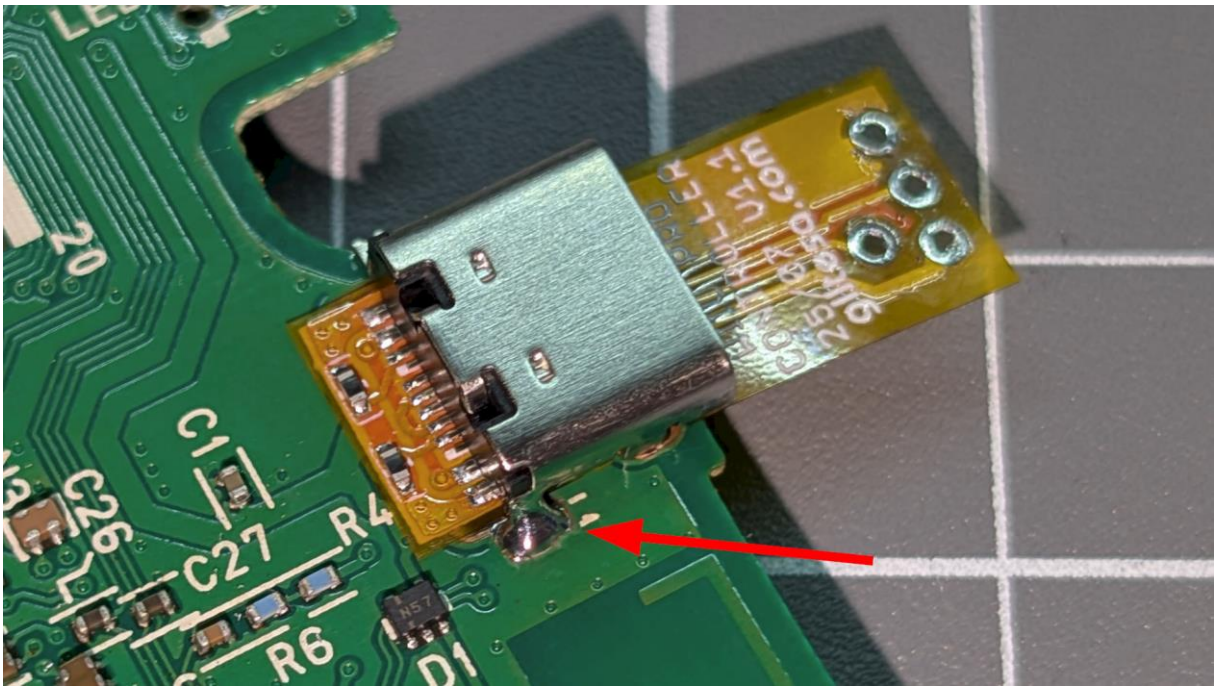


As for the left pin, it is not possible to solder it anywhere. It is not shown in the photos, but **it had to be cut** later because it interferes when closing the casing.

Take the opportunity to **cut the pin with cutting pliers**, and you can also **pre-tin all the pads on the circuit on both sides**. Do not apply too much solder.

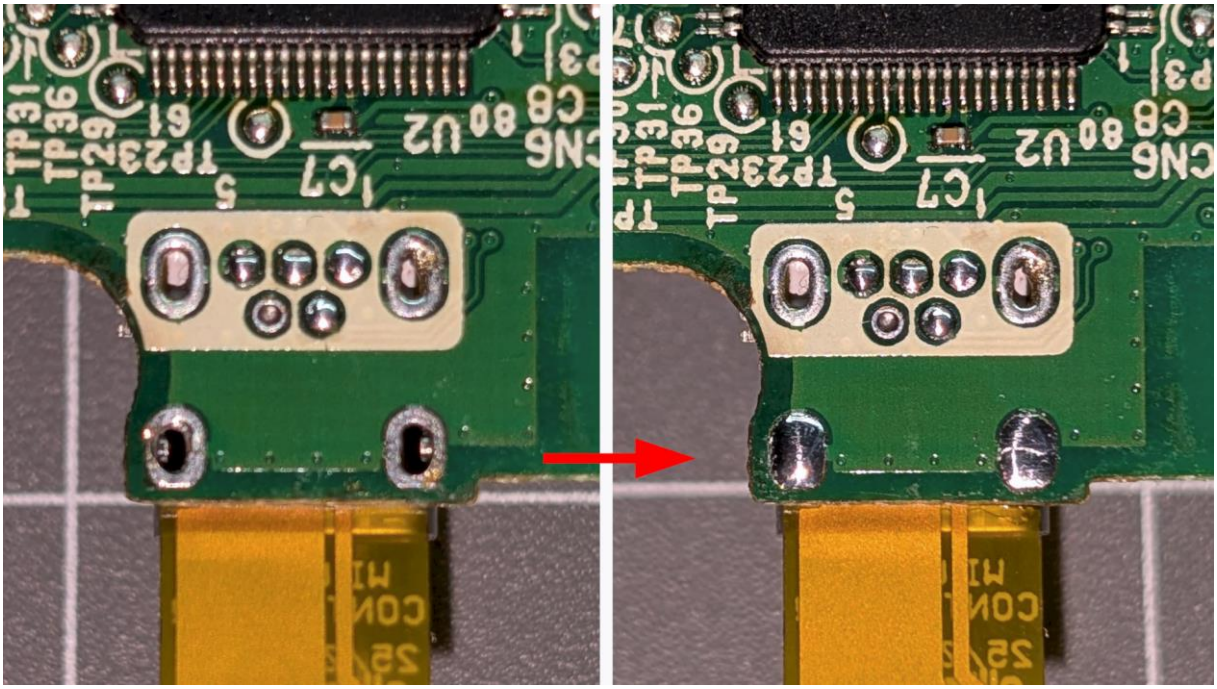


Put the USB-C connector back in place and then **solder the rear pin of the connector**. Make sure it is properly soldered and that the USB connector is completely flat against the circuit board.

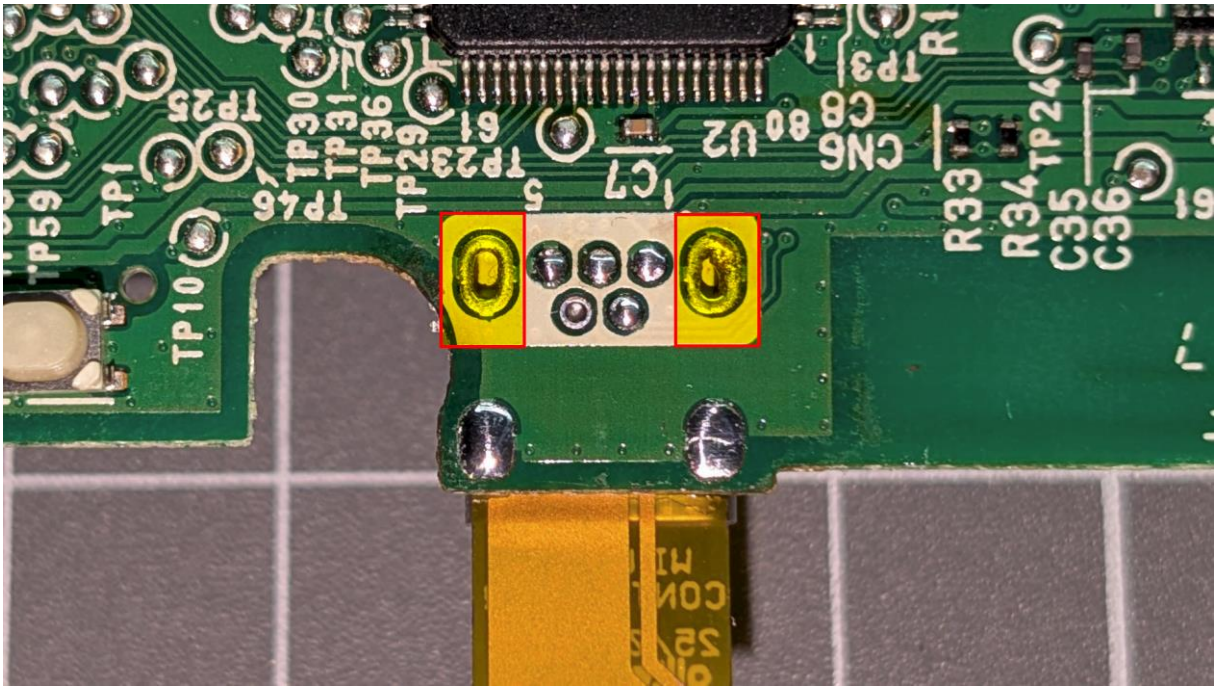


Then turn the circuit board over and solder the two front pins of the connector.

Take the opportunity to pre-solder the four pads where the flexible circuit will be soldered.



It is highly recommended to cover these two pads with kapton tape since they are too close to the pins that will be soldered. This will help prevent short circuits.

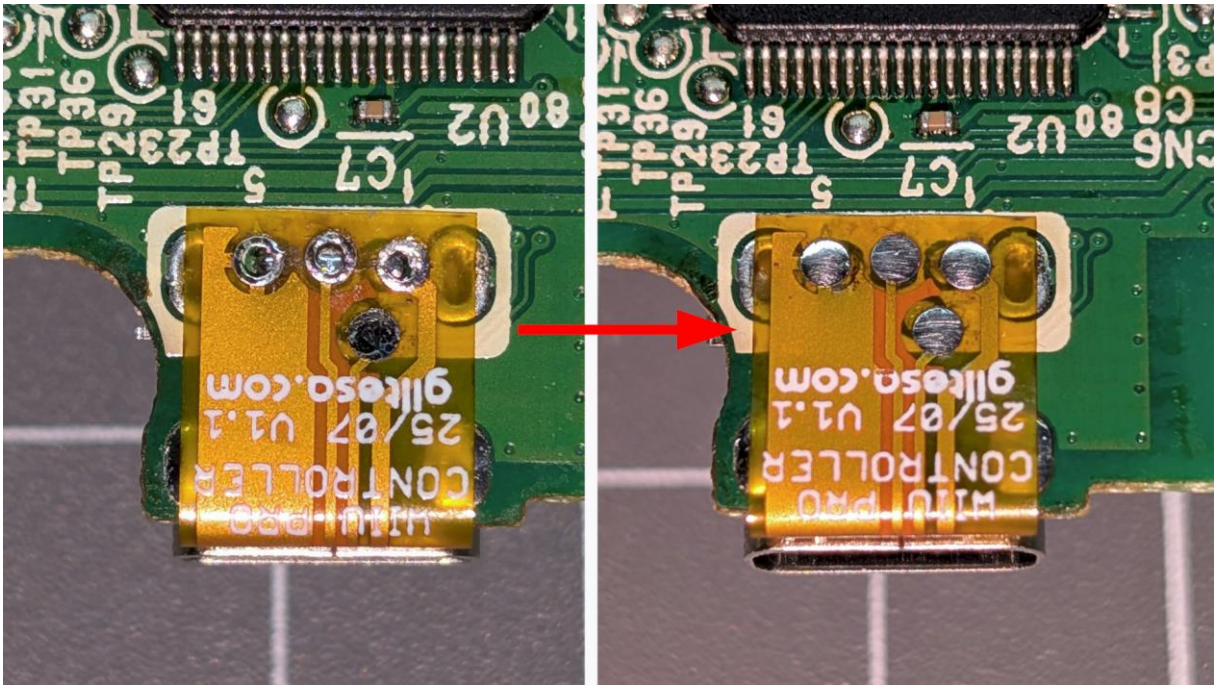


Now, bend the flexible circuit and center it over the circuit pads.

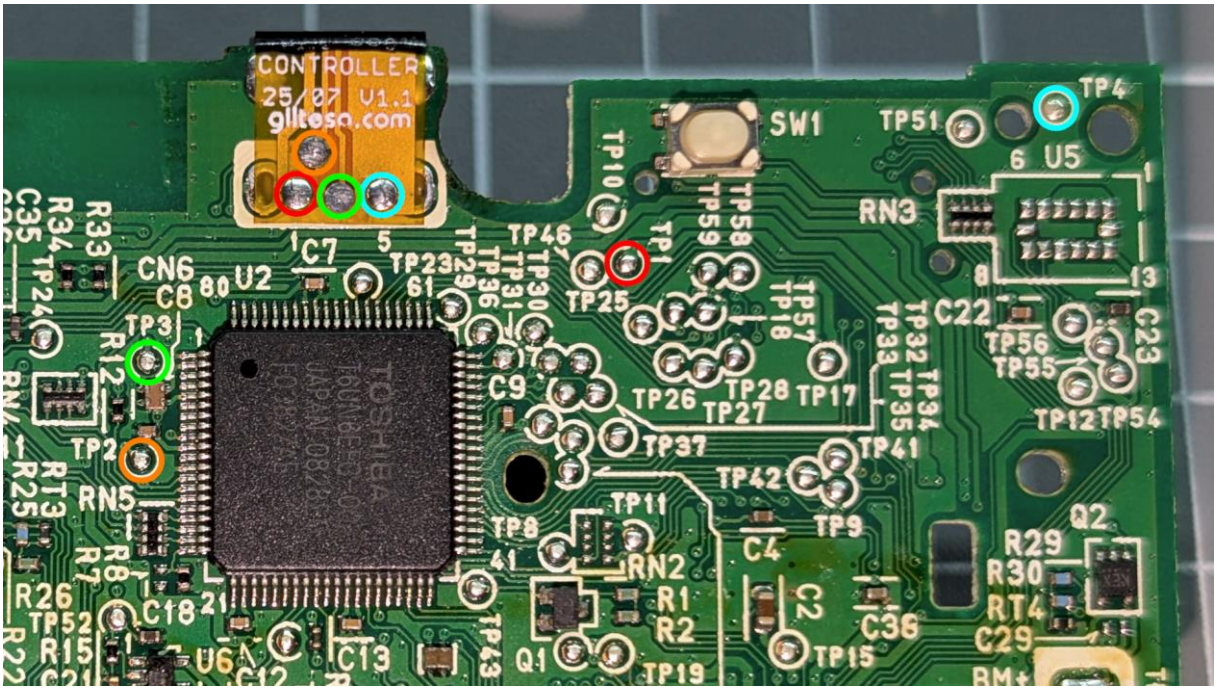
You will notice that the center of the holes does not match the center of the holes on the circuit board. This is normal since this board was originally designed for the Wii U controller. However, it can be soldered without any problem because the pads of both boards will be joined through the outer contours of the pad.

Place the soldering iron on one of the pads and, since both are pre-tinned, they will fuse together. While soldering, use tweezers to apply pressure on the flexible circuit so that it makes contact with the controller circuit.

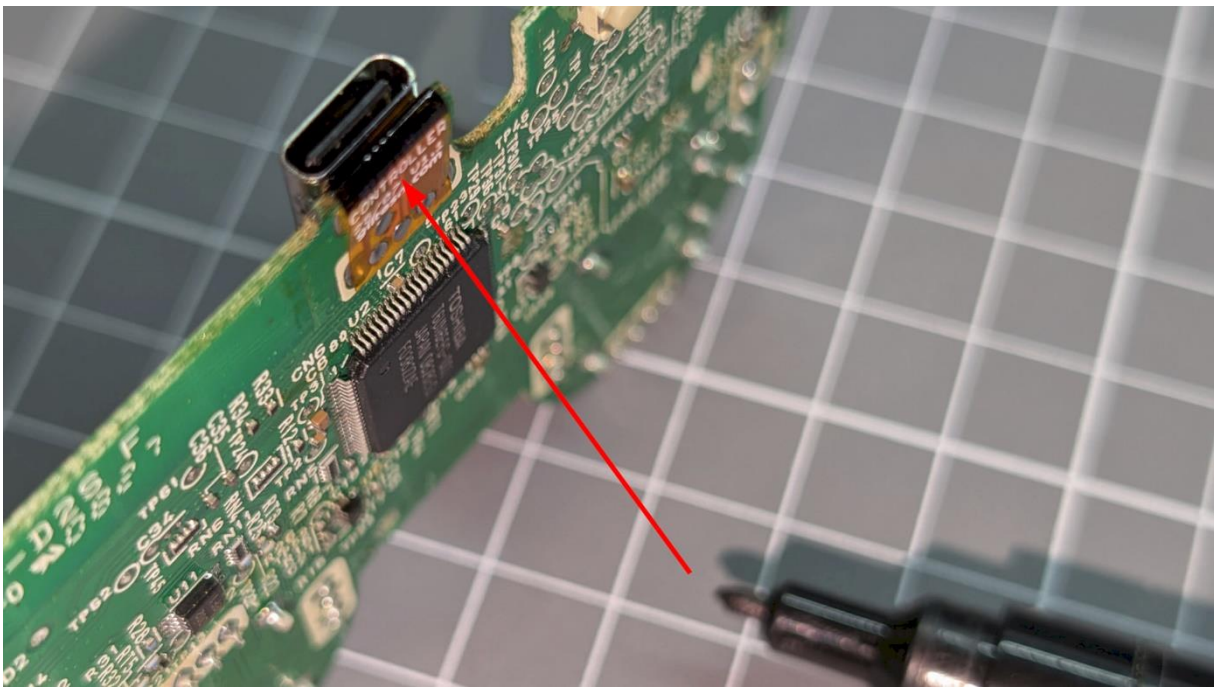
Repeat the process with the remaining pads.



Using a multimeter in continuity mode, you can verify that each pad is correctly soldered. **Check that there is no continuity with adjacent pads**, and then **check that there is continuity with the test pads** on the circuit.

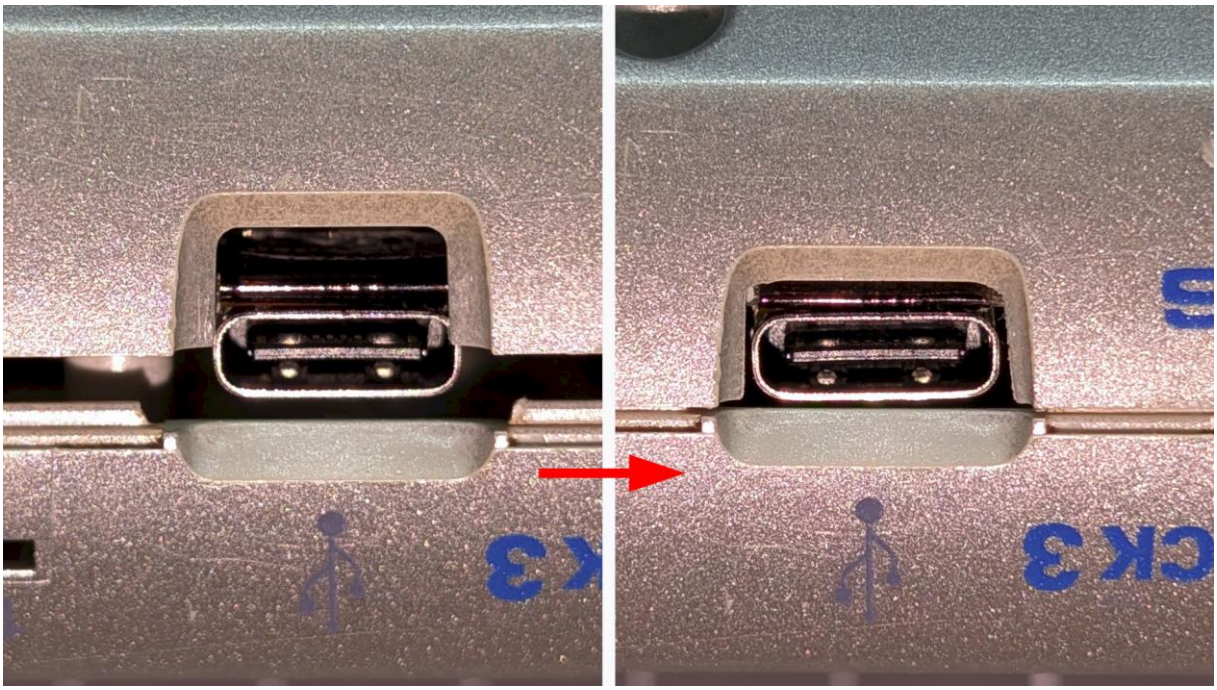


It is recommended to paint the front area of the flexible circuit with a permanent marker. This will prevent the yellow circuit from being visible once the installation is finished.



2. CUTTING THE PLASTIC SHELL

To finish, it is necessary to slightly enlarge the connector hole in the rear casing. It is only necessary to remove about 1 mm of plastic on each side. This can be done using metal files or a cutter.



3. *DONE!*

The installation is complete. Follow the steps in reverse to close your controller and enjoy it powered by USB-C!

FREQUENTLY ASKED QUESTIONS - WII U PRO CONTROLLER

WHAT CHARGER CAN BE USED?

You can use any standard charger for mobile phones, computers, etc., with 5V 1A. It doesn't need to be a Power Delivery charger since this feature is not used. Of course, if you want to use a Power Delivery charger, there's no problem or risk.

Technical data for curious minds:

Power Delivery chargers can supply a wide range of voltages: 5V, 9V, 12V, 15V, and 20V. However, for this to happen, the device must communicate with the charger to explicitly request the desired voltage. Without this communication, the charger will never supply more than 5V. That's one of the advantages of USB-C, as it can be used with both old and modern devices.

CAN I CONNECT THE CONTROLLER TO THE PC?

The circuit supports data communication, but this feature is not used. Perhaps the manufacturer included it in case a firmware update was needed.

Ultimately, the new USB-C connector will allow you to do the same, and nothing more, than the original MiniUSB connector.

FREQUENTLY ASKED QUESTIONS - PLAYSTATION 3 DUALSHOCK CONTROLLER

WHAT CHARGER CAN BE USED?

You must use the PS3 to charge your controller. It is not possible to use a USB charger because the controller only charges when it detects that it is connected to the console or to a PC where the driver software has been installed.

CAN I CONNECT THE CONTROLLER TO THE PC?

You can, but it will only work and charge if you have previously installed software that makes it compatible with the PC, such as ScpToolkit.